
Description: New research findings, data, and the latest applications in infrared and Raman spectroscopy

The Sixth Edition of this classic publication continues to set the standard as the most comprehensive guide to infrared and Raman spectra of inorganic, coordination, organometallic and bioinorganic compounds. From fundamental theories of vibrational spectroscopy to applications to a variety of compound types, all the topics in the Sixth Edition have been thoroughly updated with the most relevant findings and developments.

Part A of this two-volume work offers clear explanations of basic theories of normal vibrations, including normal coordinate analysis, resonance Raman spectroscopy, and vibrational analysis of crystals. It then applies these theories to relatively simple inorganic compounds. In addition to general updating, the highlights of this edition are:

- Theoretical calculations of vibrational frequencies by DFT method
- Chemical synthesis of novel inorganic and coordination compounds by matrix co-condensation reactions
- Measurements of an extremely small isotope shift of UF6 by 235U/238U substitution
- Vibrational spectra of fullerenes, endohedral fullerenes, and carbon nanotubes

Throughout the publication, references guide readers to the literature for more in-depth investigations into individual topics.

Used alone in combination with Part B, which covers applications in coordination, organometallic, and bioinorganic chemistry, this volume is an excellent reference for chemists working with infrared and Raman spectroscopy. In addition, both volumes are recommended as a textbook for graduate-level course work.

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PREFACE TO THE SIXTH EDITION.

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